

CLAIMS

1. Process for the production of a picture from an original image, which is present in electronic form, by pixel-by-pixel recording of the digital image data of the original image onto a sheet type picture carrier, which is transported onto a recording platform and positioned thereon, comprising the steps of
measuring the size and relative position of the picture carrier on the recording platform; and
carrying out a position and size correction on the basis of the measured data obtained by the measuring of the picture carrier, for recording of the digital image data of the original image onto the sheet type picture carrier.
2. Process according to claim 1, wherein the recording of the image data is carried out with a projection or imaging optics by exposure of the picture carrier, transverse positioning errors of the picture carrier transverse to the transport direction of the picture carrier relative to a nominal position on the recording platform are determined, and an image shift by the transverse positioning error is carried out through corresponding local adjustment of at least parts of the projection or imaging optics.
3. Process according to claim 2, comprising the further steps of determining the width of the picture carrier as measured transverse to the transport direction, and adaptation of the image size to the determined width of the picture carrier by corresponding adjustment of at least parts of the projection or imaging optics.
4. Process according to claim 1, wherein the digital image data of the original image are transformed by recalculation for the position and size correction by way of the measured data determined during measuring of the picture carrier, and the transformed image data of the original image are recorded onto the picture carrier.

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5. Process according to claim 4, comprising the further steps of determining a transverse positioning error of the picture carrier transverse to the transport direction of the picture carrier relative to a nominal position on the recording platform, and carrying out an image shift by the transverse positioning error.
6. Process according to claim 4, comprising the further steps of determining the width of the picture carrier as measured transverse to the transport direction, and adapting the image size to the determined width of the picture carrier during transformation of the image data.
7. Process according to claim 4, comprising the further steps of determining the longitudinal positioning error of the picture carrier parallel to the transport direction of the picture carrier relative to a nominal position on the recording platform, and carrying out an image shift by the longitudinal positioning error during the transformation of the image data.
8. Process according to claim 4, comprising the further steps of determining the length of the picture carrier measured parallel to the transport direction, and carrying out an adaptation of the image size to the determined length of the picture carrier.
9. Process according to claim 4, comprising the further steps of determining an angle of rotation of the picture carrier relative to a nominal angular position on the recording platform, and carrying out an image rotation by the angle of rotation during the transformation of the image data.
10. Process according to claim 4, wherein the measurement of the picture carrier is carried out by way of a photoelectric scanning device positioned at the recording platform or in the immediate vicinity thereof.

11. Apparatus for the production of a picture from an original image, which is present in electronic form, by pixel-by-pixel recording of the digital image data of the original image onto a sheet type picture carrier, comprising
a memory for storage of the image data of the original image,
a recording platform on which the picture carrier can be positioned in a recording position,
transport means for transporting the picture carrier on the recording platform,
a digital recording device for recording the image data of the original image onto the picture carrier positioned on the recording platform,
a photoelectric scanning device for the picture carrier located in the immediate vicinity of the recording platform,
a position processor cooperating with the scanning device, the scanning device and the position processor being constructed for measuring the size and relative position of the picture carrier on the recording platform and for determining corresponding measured data, and
a control cooperating with the position processor for carrying out a position and size correction on the basis of the measured data obtained during the measuring of the picture carrier, for the recording of the digital image data of the original image onto the sheet type picture carrier.
12. Apparatus according to claim 11, further comprising a projection or imaging optics for recording the image data by exposure, whereby the position processor is constructed for determining a transverse positioning error of the picture carrier transverse to its transport direction and relative to a nominal position on the recording platform, and the control is constructed for carrying out an image shift by the transverse positioning error by corresponding adjustment of at least parts of the projection or imaging optics.
13. Apparatus according to claim 12, the position processor being constructed for determining from the scanning signals produced by the scanning device the width of the picture carrier

as measured transverse to the transport direction, and for adapting the image size to the determined width of the picture carrier by a corresponding adjustment of at least parts of the projection or imaging optics.

14. Apparatus according to claim 11, wherein the control is constructed for transforming by calculation the image data of the original image prior to recording on the picture carrier according to the measured data for carrying out a position and size correction.
15. Apparatus according to claim 11, wherein the scanning device is positioned in the transport path of the picture carrier on the recording platform and extends transverse to the recording platform.
16. Apparatus according to claim 15, the scanning device comprising
 - an illumination arrangement for exposure of the picture carrier with measuring light,
 - and
 - a linear arrangement of photoelectric converter elements for receiving and converting the measuring light remitted from the picture carrier into electrical signals.
17. Apparatus according to claim 14, wherein the position processor is constructed for determining from the scanning signals produced by the scanning device a transverse positioning error of the picture carrier transverse to the transport direction of the picture carrier relative to a nominal position on the recording platform, and for carrying out an image shift by the transverse positioning error during transformation of the image data of the original image.
18. Apparatus according to claim 14, wherein the position processor is constructed for determining from the scanning signals produced by the scanning device a longitudinal positioning error of the picture carrier parallel to the transport direction of the picture carrier

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relative to a nominal position on the recording platform, and for carrying out an image shift by the longitudinal positioning error during transformation of the image data of the original image.

19. Apparatus according to claim 14, wherein the position processor is constructed for determining from the scanning signals produced by the scanning device the width of the picture carrier as measured transverse to the transport direction, and for carrying out an adaptation of the image size to the determined width of the picture carrier.
20. Apparatus according to claim 14, wherein the position processor is constructed for determining from the scanning signals produced by the scanning device the length of the picture carrier as measured parallel to the transport direction, and for carrying out an adaptation of the image size to the determined length of the picture carrier.
21. Apparatus according to claim 14, wherein the position processor is constructed for determining from the scanning signals produced by the scanning device an angle of rotation of the picture carrier relative to a nominal angular position on the recording platform, and for carrying out an image rotation by the angle of rotation during the transformation of the image data.

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